KENTAN

SWITCHBOARD EQUIPMENT AND AUTOMATION

Busbar Joint Covers

Low Voltage Switchboard Equipment

Publication JC 2020

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Descriptive

Use

KENTAN BUSBAR JOINT COVERS solve the problem of insulating the connections in insulated busbar systems.

Busbar connections are most commonly insulated (when specified) by the following methods:

- Insulation Tape
  Tape is often not replaced after maintenance of the connection. Appearance is untidy.

- Heat Shrink Sleeving (Held in place by cable ties, etc)
  Often not replaced after maintenance of the connection. Very untidy appearance.

- Liquid Formulations (Paints, varnishes, etc)
  These are not allowed by the standard. Inspection and maintenance of the connection is discouraged, especially if the material is difficult to remove.

- Epoxy Moulding
  Acceptable, but seals the connection, preventing access.

The KENTAN BUSBAR JOINT COVERS:

- Are specifically designed for purpose.
- The two halves of the cover are held together by screws to give access to the joint and easy replacement for inspection and maintenance.
- When used with the KENTAN BUSBAR SLEEVING (refer to Publication BI 2020) a completely insulated busbar system, without additional forms of separation is achievable.
- May be used with other types of busbar insulation such as heat shrink sleeving.

Description

JOINT COVERS are available in several sizes, each with 2 depths.
The covers are made from pliable injection moulded PVC compound, not less than 1.6mm thick. The two halves making up one cover are held together by screws supplied and chosen by the switchboard builder. Holes are moulded into the external flange for this purpose. Busbar entries are made by cutting the covers to suit.

Technical

Compliance to Standards

The covers comply with the following clauses of AS/NZS 6139.1 : 2016 8.4.2.2 Basic insulation provided by insulating materials:

- Live parts shall be completely covered with insulation which can only be removed by destruction or by use of a tool
- Flame retarded PVC, 1.6mm thick

Used with the BUSBAR SLEEVING, the insulation system can be classified as a busbar enclosure (separation of busbars from functional units) as per table 104 of AS/NZS 61439.1 : 2016.

Insulation

Clause 10.9.4 Testing of enclosures made of insulating material
Test Voltage 3500V x 1.5 = 5250V AC (Table 8 only requires 3300V)
Rated Insulation Voltage 1000V

Flammability / Fire Hazard

The sleeving has been tested to AS/NZS 606952.11 : 2001 and complies to Glow-wire flammability rating of 960°C.

Material Details

Product name	PVC Compound (lead free)
Grade	F188C02
Standards	Complies with AS/NZS 3802 : 2000 for V90HT Insulation and SV90 Sheathing
Flammability	Self extinguishing

Installation

Select The size of cover to suit the connection

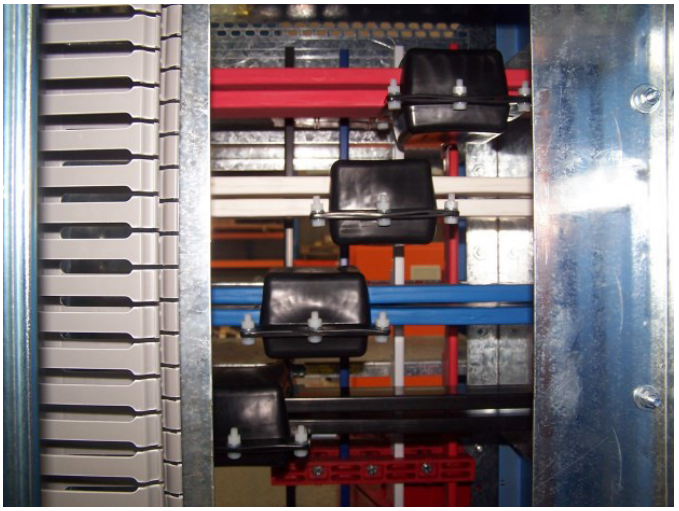
Mark the areas to be cut (A white ink marker is recommended)

Cut using a knife (Placing the cover over a piece of wood makes handling easier)

Place over the busbar connection (For single bars only cutting one half of the cover is necessary

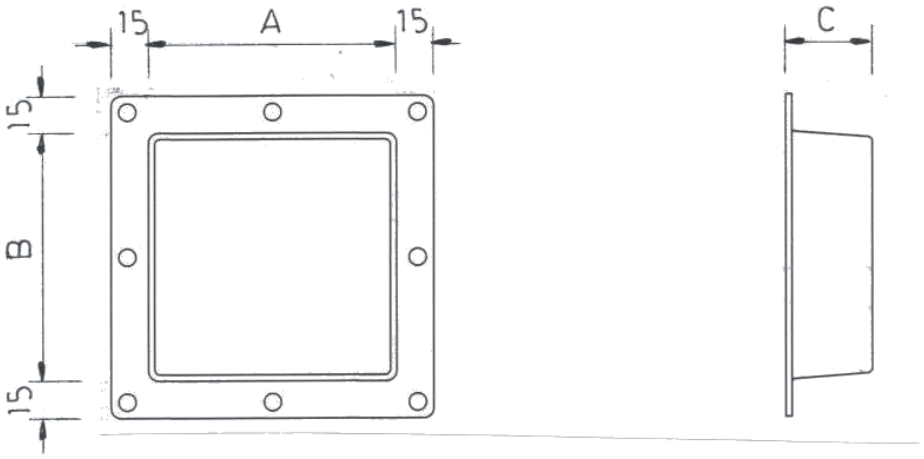
Fix halves together using M6 hardware
(M6 x 16 nylon bolts and nuts recommended)

Installation

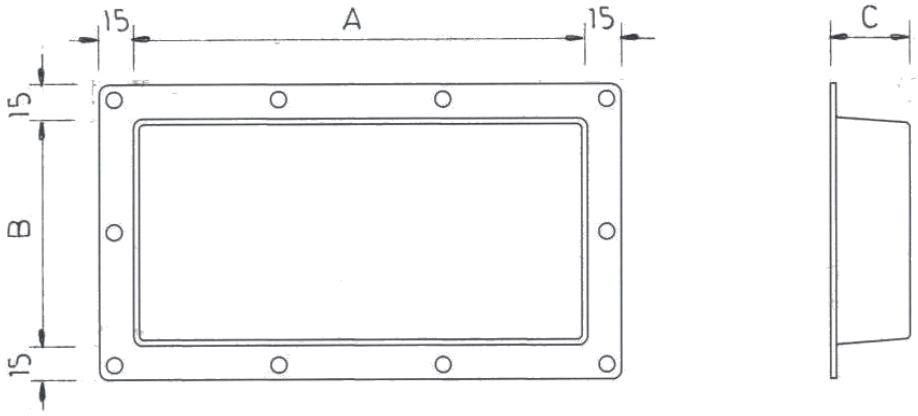


Typical rear sections of switchboards showing busbars insulated by rigid sleeving and busbar joint covers

Installation



A	B	C
90	90	25
		45
135	135	30
		50
170	170	30
		50



A	B	C
200	100	30
		50

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